

For Amos C. B. Nathan
La. Smith
A
CONCISE HISTORY

OF THE

AUTUMNAL FEVER,

WHICH

PREVAILED IN THE *BOROUGH OF WILMINGTON,*

IN THE YEAR

1802.

By Dr. JOHN VAUGHAN.

WILMINGTON, (DEL.)

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1803,

THE HISTORY OF THE

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CONCISE HISTORY, &c.

OF THE

Autumnal Fever,

Which prevailed in the Borough of Wilmington, in the
Year 1802.

*With a brief inquiry into the origin and nature of the Disease, in a
letter from Dr. JOHN VAUGHAN to Drs. CURRIE and CATHRALL of
Philadelphia.*

Drs. CURRIE & CATHRALL,
Gentlemen,

YOUR favor of the 31st of December, accompanied by your publication on "the origin, progress and nature of the fever," which prevailed in Philadelphia and Wilmington, in the autumn of the year 1802, is duly received. I regret that the imperious nature of the contract made with the publisher, previous to the receipt of my letter of the 6th of December, should have precluded all the collateral facts and inferences respecting the origin and nature of the disease.

The abstract published, is but a summary of historical facts, separated from all the relative circumstances, which have influence on the important question of discussion; and, believing the phenomena of the disease and the accompanying states of weather, essential to a fair view of the subject, I submit them to the public, with their original address.

In your letter of the 3d December 1802, you desired to be informed of the facts which have come to my knowledge respecting our autumnal fever, including a statement of its rise, progress and termination—state of the weather &c. and I cheerfully complied with your request. For, however we may differ in opinion on the abstract question of the origin and contagious, or infectious nature of pestilential fever, I am persuaded we are mutually disposed to estimate facts according to their intrinsic merits, and equally anxious to elucidate the important question—whether the pestilential disease, which has for some years past afflicted our Cities and Towns, *be of foreign or domestic origin?*

Destined, by a combination of circumstances, to bear a considerable share in the tragedy of the season, and having witnessed the passing scenes in regular succession, I think myself prepared to state things as they really were, and shall exercise the privilege of making such conclusions from them as appear to be authorized by the accepted rules of induction. Narration is a task, over which the will has no control; but, independency of opinion, is a right common to all men; and a right, which ceases to be meritorious whenever it is influenced by artificial circumstances. On the guarantee of these attributes of individual justice, I most cheerfully unite with you in an investigation of the origin and nature of our autumnal disease, and feel no tenacity for particularity of opinion, further than that opinion appears to me connected with impartial observation and sound reasoning.

When the disease of the season became alarming in your City, our Board of Health adopted various measures for the purpose of guarding us against the introduction of contagion, by the fugitives from Philadelphia. Some were admitted immediately, on giving satisfactory evidence of their not having been exposed to contagion, and others were enjoined to perform a quarantine of ten days, without the limits of the Borough. At the same time, vessels

from foreign ports and from Philadelphia, were restricted to such quarantine as, on the examination of the Health Officer, and the subsequent deliberation of the Board of Health, appeared to be necessary. Some regulations were, also, prescribed and published for domestic precaution, but none of them executed. Under these conditions; the month of August passed away, without much alarm. A few cases of aggravated fever occurred. A lady from the marshy country near Christiana Bridge removed here, and died with suspicious symptoms, on the fourth day of the disease. Ann Davidson, a young woman who came from Philadelphia in the begining of the month, was reported by the health officer on the 15th to be affected with contagious fever, at her fathers house, King street. Johnson Owens, a shallopman in the employ of Cyrus and Robert Newlin, who had for some time labored under intermittent fever, was at length confined at his father's house in French Street, and died on the 1st of September, with black vomit and other symptoms of malignant disease.— This man had been at Philadelphia, with the vessel, a few days before his confinement.

The case of Ann Davidson, as she resided in a compact part of the town occasioned the greatest alarm, although she recovered in a few days, without any of the more violent symptoms of febrile disease. With her recovery the alarm, in a great degree, subsided. But, as that part of the town afterwards became the seat of malignant fever, it may be necessary to give you a topographical sketch of its situation.

Wilmington is seated on a hill of 109 feet elevation; the more compact part of the town is on the south western declivity, bounded by the waters of the Christiana, and intersected by streets at right angles, runing nearly north and south from the Brandywine to the Christiana, and east and west, from the flats bordering on the Delaware to a range of hills forming the western margin. The cen-

tral and principal street in population and trade is Market-Street, running north and south, and King-Street, French-Street and Walnut-Street, in parallel lines on the southern side; intersected by Water-Street, Front-Street, Second-Street, Third-Street, &c. running parallel with the Christiana. The latter described district, south of Market and Third-Streets, became the principal seat of disease.

King-Street is contracted to the limits of a common alley, from Second-Street to the Christiana, and midway between Second and Front-Streets are two old wooden buildings, one of which was occupied by Thomas Davidson (father of Ann Davidson) and the other by John Hadley. The latter had for some time mouldered under the hand of time; the roof, weather boarding and flooring were partly destroyed, and the whole condemned to be unworthy of repair. The cellar of this miserable dwelling was constantly full of water (which made its way thro' to Davidson's cellar) and was the common receptacle of every species of filth. This nest of noxious effluvia, was offensive to the whole neighborhood from the beginning of August; was daily complained of by the neighbors, and reported to the police as a public nuisance, and condemned as such—but not removed.

In the beginning of September, several persons sickened in King Street, and on the 4th and 5th there were four deaths, without much previous alarm, in and immediately adjacent to this filthy abode of human wretchedness—i.e. Thomas Musgrove's child on the 4th. J. Hadley's wife, with five days illness, on the 5th. The 2d case, was a hired girl in the family of Capt. West, nearly opposite to Mr. Cloud's, and separated from Hadley's cellar only by a small vacant lot. This Girl had migrated from Philadelphia, between four and five weeks before her death, and the last two weeks was affected with feverishness, added to chronic disease.—On the 1st inst, she had a chill and fever, succeeded by a regular paroxysm every day; on the 3d, dysenteric symptoms supervened succeeded by

delirium, and died in the night of the 4th without vomiting, hemorrhage, or other malignant symptoms. Mordecai Cloud, at the North corner of King and Second Streets, who was attacked on the 30th ult, with chill and fever, and of his own accord, took some of Napier's pills which operated drastically, and his fever subsided on the next day. He afterwards refused medicine, but complained of sickness at the stomach, weariness & drowsiness until the morning of the 5th, when great anxiety and restlessness with a vomiting of dark colored matter closed the delusive scene, at one o'clock. Mr. Cloud was a worthy member of society; and tho' he resisted every intreaty to take medicine, I visited him several times a day, and frequently mentioned to the family, that there was a degree of anxiety in his case indicative of a dangerous issue.

Alarm now became general, and on inquiry it was found, that several other cases of disease existed in the lower part of the town. Hannah Robinson, at the north corner of King and Front Streets, was attacked on the 2d, and died on the 9th instant. Lewis Brown, at the corner of Second and Walnut Streets, attacked on the 3d, & recovered after a severe illness of ten days—Mrs. Day, next door to Mrs. Browns, in Second-Street, sickened on the 8th and died on the 11th, and Samuel Bush's family, in Second, at the east corner of King-Street, and Timothy Jackson's daughter and wife, in Second between King and French Streets, were attacked about the same time; Mrs. Jackson died on the 14th—to the westward, Elias Dale, in Front near Market-Street, sickened on the 2d; was extremely ill and recovered—J. Warner's bound girl, in Market between Front and Second-Streets, attacked on the 4th; recovered—and R. Hagin's son, in Thoma-Street, distant west from King-Street 3 1-2 squares, attacked on the 3d, recovered—this boy had gone to school in King, near Second-Street.

So many cases of disease occurring within a few days, and for the most part in a small circle, necessarily excited

great alarm, and on the 9th, the Board of Health addressed a circular letter to the Physicians of the Borough, requesting "a collective opinion on the existing disease," to which the faculty replied that, "A Bilious fever of a formidable grade has for some time past existed in our Borough, and attended with unusual mortality—Whether the disease be contagious or not, we are of opinion its present features demand attention? It may, however, be necessary to remark, that the disease may hereafter be comparatively moderate or violent, as incidentally influenced by the sensible qualities of the atmosphere."

"We beg leave to suggest for your consideration, the necessity of cleansing the lower parts of the town and removing all putrefactive materials from the streets, cellars, yards &c. without further delay."

In addition to these recommendations to the Board of Health, it was mutually agreed, by the Physicians who then had cases of malignant fever under their care, to advise an immediate desertion of the infected district, and a number of families removed forthwith into the country. Some, who might have removed were, detained balancing between their hopes and fears until overtaken by disease; alarmed at every sound of the fever, and yet too irresolute to seek refuge in flight. Others, who could not remove, remained in constant dread of being attacked. These circumstances tended greatly to increase the fatality of the disease.

The state of the weather in the early part of September, must be noticed in the history of the disease. On the second, the temperature changed from 85° to 70°, and on the 5th was accompanied with a strong northwestern breeze. From the 7th to the 10th it was temperate and afterwards warm, with fogs in the mornings, occasional lightning in the evenings, winds southerly. On the 17th we had a thunder gust, succeeded by a hot afternoon, wind westerly—18th, alternately cloudy and hot, wind

west—19th cool and misty, and from the 20th to the 24th, we had occasional gusts of rain with lightning, alternated with scorching sun, shine, wind variable. On the 24th, it became cool with the wind at N. W. and continued cool, with variable winds; until the 28th—29th, and 30th temperate and stationary, wind westerly.

From the 10th to the 18th, inclusive, we had but five deaths with fever, and though new cases occurred, they became less alarming as the disease moderated in violence. In a report to the Board of Health on the 20th, at which period the duties of Health-Officer had devolved on me, is the following statement—“there are twenty one cases of fever of various grades, now under my care within the Borough. Seven of them are intermittents, thirteen are remittents, and one puerperal fever—Several of this number are convalescent, a few ill, and one dangerous.” The town was, at this date, comparatively healthier than the adjacent country; but, the scene soon changed with the weather, and on the 23d, the Board of Health requested a report of the existing state of things, and an opinion respecting the propriety of removing nuisances at that time—reply,

“The request of the Board of Health, respecting the present state of disease in the lower part of the town and the propriety of removing collections of filthy and noxious matters, at this time, shall receive a prompt reply.

“In my report of the 20th, thirteen cases of remittent fever were enumerated, within the Borough, one dangerous—since dead. In the interim, the list is considerably enlarged, particularly in the district south of Second Street, and supposing your attention to be specially directed to that district, I shall confine this report to the same limits.

“The persons probably requiring the attention of the Board, are” (here sundry persons were named for the sa-

tisfaction of the Board; viz. J. Hadley's child, King street—a woman, two men and a girl, in three different families, in Second between King and Market-Streets—a man in Market near Water-Street, and a woman in do. between Second and Front-Streets—a woman, man and boy, in separate families, in Front between Market and French-Streets—a lad and negro girl, on opposite sides of French above Second-Street—two women and a child, in Walnut near Front-Street)” and several others whom it is perhaps unnecessary and improper to mention, are in different states of fever.

“ The present state of the weather is extremely unfavorable to persons affected with bilious fever, and when we consider the situation of some of the present sick, we may reasonably expect a few cases of mortality. The season, state of the weather, and general prevalence of bilious fever in the country, combine in the establishment of a belief, that our disease is epidemic, uninfluenced by human contagion. An useful lesson, is also afforded us, by the cases of a malignant grade being principally confined to a certain district of our Borough, while the milder forms of fever, and but few of them, exist in the middle and higher parts of the town.

“ The question respecting the propriety of removing noxious matters from cellars &c. at this time, is interesting to the community and demands deliberation, but, I am strongly impressed with the belief, that an attempt to remove some of our nests of effluvia, at this period, would be aggravating the evil. If the filth of the prescribed cellars &c. were now stirred up and set afloat in the air, it would not be generally diffused in the atmosphere, but hover about us in the disguised shape of fog, until dissipated by a fortuitous change of weather or disarmed by frost.—From the advanced state of the season, it is in fact questionable, whether it be not most safe, to let things remain as they are until frost and make use of lime freely to correct the miasmata casually evolved.

“There are many instances on record of embedded filth being stired up at improper seasons, to the great injury and destruction of mankind; and the only safe expedients which occur to me respecting Hadley’s cellar are, either to cover it over, until frost, or hastily drain it off, during a strong northerly wind, into a well dug for the purpose and correct the remaining ordure with lime.”

I am &c. J. V.

Sept. 23d, 1802.

Nothing was done at the time towards improving our condition. There was no Hospital establishment for the indigent sick, nurses who would do justice to the sick, could not be obtained, and the Board of Health had neither powers nor funds to do much for their relief. The disease progressed with accumulated violence. From the 22d to the 30th inclusive, there were 15 deaths. Making the total number in September, 34, including W. Preston and wife, who removed from the south corner of King and Water Streets, & died in the country—of whom died with fever, of different forms---26—

Of worms	1	
Chronic disease	2	
Palsy	1	
Hydrothorax	1	of whom, were males 10
Chlorosis	1	Females, 17
Hooping cough	1	Children, 7
Doubtful (a stranger)	1	
	<hr/>	<hr/>
	34	34

On the 29th, the weather became pleasant and stationary. The number of new cases lessened considerably, and the greater part of those, who could remove, were fled. The whole number of persons remaining in the district south west of Second Street on the 1st of October, was only 605—Of whom, 25 were sick; 7 of them ill and 18 convalescent—to these may be added, 10 sick, to the eastward of Market and Second Streets, total 35.

From the 1st to the 10th, of October, the weather was nearly stationary. The days warm with fogs in the mornings, winds southerly and westerly. The 11th and 12th, more cool—14th warm—15th hot, with diffused fog. During this period, the disease was comparatively regular—more or less, new cases occurred every day; and there were 17 deaths, from the 1st to the 15th, inclusive.

On the 16th, 17th and 18th the weather was disagreeably cool, cloudy and drizzling—the 19th clear and warm, and from the 20th to the 24th, it was misty and unpleasantly cool, again—wind varying from the North East—25th clear and cool, wind N. West—26th cool, with flying clouds—the 27th was hazy in the forenoon, but cleared P. M. with a violent thunder-squall from the W. N. W.—28th, a clear morning, with ice—29th and 30th, the same, winds W. N. W.—31st, rain, wind N. East, but cleared in the night, and a severe frost, on the wings of a northwestern breeze, ushered in the morning of November.

From the 15th the disease was formidable, beyond any precedent, and sporadic cases occurred in the two squares, immediately north of Third Street. About the 20th, the inhabitants, in the higher and previously secure parts of the town, were seized with consternation, and fled.—A melancholy gloom pervaded the deserted Streets, and the forlorn subjects of disease, suffered accumulated miseries. Altho,' no new cases of disease occurred after the icy morning of the 28th, there were 31 deaths, from the 15th, inst. to the 2d of November.

From the 1st to the 15th, inclusive,	17
15th to the 31st	29
November 1st and 2d	2

The thunder storm, on the evening of the 27th, and subsequent ice on the morning of the 28th, eradicated every atom of infection, whether of foreign or domestic ori-

gin? And the clear and cool *morning of November*, would have been hailed thrice welcome, but the minds of the inhabitants were impressed with a deep and solemn melancholy, by the funeral obsequies of the Howard of Wilmington, MR. JOHN FERRIS, JUN'R. This much valued citizen, who had passed through the awful calamity of 1798, in acts of humanity to his fellow-citizens, resumed his benevolent office, on the reappearance of pestilence this season. His whole time, his heart, his every affection, were engrossed in friendly attentions to the sick of all classes and descriptions. He earnestly sought out the indigent victims of disease, and furnished them with every aid in his power. He saw, he participated in their sufferings, & he consoled them by sharing in their distresses! Humane reader, had you seen him in his accustomed walks, dispensing comforts to the afflicted, by day and by night, you would drop a tear of sensibility on the record of his untimely end! It was my daily business, to witness the former—it is not human to restrain the latter. We were co-partners in the distresses of the times, and allied by mutual hazards. *On the 27th of October*, HE was attacked, and on the 31st fell a victim, to the insidious and relentless malady. As the weather had become cold, his corpse was, by request, reserved from interment until the 1st of November, when a great portion of the surviving inhabitants, performed the last sad office of mortality, and deposited his remains in “the solitary mansion of the dead!” Pensive silence, the true emblem of sorrow, sat on every countenance. The whole town was in mourning!

The whole number of deaths from the first of September to the second of November, was, in September—34

in October 46

in November 2

Of this number two died in the country; and of the other emigrants, who sickened after removal, 4 died—making our whole loss by death—86.

By fever, in town	66
in the country	6
	<hr/>
	72
Worms (children)	3
Chronic diseases	2
Dropsy	2
Palsy	1
Chlorosis	1
Hooping-Cough	1
Scarlet-Fever	1
Diseases, not specified,	3
	<hr/>
	86

The sufferers, were adult males, 33
 Females 39
 and children, of both sexes 14

86

The number of defined and equivocal cases of fever, in the district south of Market and Third-Streets, both streets included, was 156, of whom died 55
 recovered 101

156

Do. in the district west of Market and Third-Streets 15,
 of whom died 5
 recovered 10

15

Sporadic cases, of a defined form and grade, in the district north and east of Third-Street, 26, of
 whom died 6
 recovered 20

26

Total cases of death, by defined and equivocal grades	
of fever	66
of recovery	131

197 the proportion of deaths was one third,
of the whole number of sick.

District north of Market and Third-Streets—cases of
scarlet-fever in the month of October, 4;
of whom recovered 3
died 1

4

Putrid sore throat in do. 1, recovered—1—ordinary
cases of disease, were not recorded.

This statement of facts, though concise, will I presume, characterize the rise and progress of our autumnal fever, & enable us to trace with success, the origin & nature of the disease. It is only by impartial records of facts, as they occur, and a mature examination of them, in connection with auxiliary circumstances, that we can hope for a decision of the important question, of the origin and nature of pestilential fever? Different persons will form different conclusions from the same facts; but a discordancy of opinion, does not lessen the intrinsic merits of established facts. A difference of opinion exists on the subject in question, but let us rest the subordinate matter of opinion on the real or apparent merits of the case.

On a review of the preceding narrative, it appears, that the disease took rise in the narrow part of King Street and the adjacent district, progressing with irregular steps over the lower parts of the town, and finally encroaching on the district north of Third Street; but was principally confined to the district south-east of Market and Third Streets.

The more prominent facts relating to the origin of the disease stand thus—1. Ann Davidson, the only person, who was or could be suspected of introducing contagion a-

mong us, came from Philadelphia in the beginning of August, to her father's house in King Street, and was reported to be affected with contagious fever on the 15th.—She recovered without suffering any of the more violent symptoms of malignant disease, and removed into the country.

2. The family in which she resided consisted of ten persons, all of whom remained well until the 7th of September, when her mother had an attack of fever, after a journey of ten miles into the country, performed partly on foot and partly in an open cart.

3. In the mean time, T. Musgrove's son—Ann Hadley, Capt. Wests Girl, Mr. Cloud and Hannah Robinson, in the same square; and R. Hagin's son, J. Warner's Girl, E. Dale and others in different directions, were attacked with malignant fever.

4. If Ann Davidson's disease were contagious, and the only source of future disease, is it not reasonable to suppose, that some one or more of the ten persons confined in a small house with her, would have been the first affected by the contagion? The reverse was the fact.

5. The first serious alarm of malignant fever, took place in the first week of Sept. The cases were principally, but not altogether confined to King Street. The square between Second and Front Streets, whose filthy cellars was a matter of notoriety and a subject of common complaint, was the more concentrated seat of disease.

6. The cases specified, evince a correspondence of dates indicating the action of a common cause, and precluding the more slow and successive routine of human contagion, from one diseased person to another.

7. The disease was suspended by the great change of weather, which took place on the 5th of September, and

resumed a formidable shape about the 9th, and became general in the southern district against the 25th of the month.

8. When the disease became alarming a second time, I personally inquired into the preliminary circumstances of every case that occurred, for the purpose of tracing their origin; and none of them could be reasonably imputed to contagion, from the previously sick.

9th. The disease was evidently subservient to the states of the weather, in declining in frequency and force in warm clear weather and reassuming a formidable shape on every change to coolness and moisture of the atmosphere.

On the most liberal view which can be taken of the rise and progress of the disease, with an unrestrained examination of the facts, as they occurred, I see no reason to suppose the insidious malady was of foreign origin or specifically contagious. On the contrary, I am firmly impressed with the belief, that it was the endemic fever of autumn aggravated to a pestilential grade, by local filth, and the tropical state of the season, in conjunction with an epidemical state of atmosphere, which appears to have influenced the diseases of our country since the memorable year 1793. This belief is further predicated on the following facts and inferences.

1. An epidemical state of atmosphere, favoring the occurrence of malignant fever, was evinced by the usual premonitory forms of disease.

The measles were epidemic in the fall of 1801, and declined during the winter giving place to the scarlet fever. The last winter was unusually mild, which gave birth to swellings of the glands, croup, and the influenza in April and May 1802.—June, was as usual, comparatively healthy; but, chequered with some cases of cutaneous disease.—In July, the putrid sore-throat occasioned con-

siderable alarm, and during the latter part of July and early part of August, the eruptive state of fever was extremely afflicting to children; and seemed to supersede the ordinary appearance of cholera infantum. In some cases general ulceration of the glands of the neck and axillæ, were so obstinate as to require a complete course of alterative remedies.

2. The season became tropical, in the middle of August. The weather, from being uncommonly cool, suddenly became extremely hot, varying from 80° 90° , with frequent gusts of rain and lightning. In the evenings of the 29th, 30th and 31st, there were excessively violent thunder storms, from the westward, with torrents of rain. It was remarkable during the autumn, that all our sudden and violent rains came from the westward, and commonly extended but a few miles along the Delaware. In misty weather, the wind was mostly north-east. But the winds were unusually variable, not unfrequently traversing the compass in twenty four hours—the changes of the weather were proportionally sudden.

3. Myriads of musquito's infested the lower parts of the town from July until frost, having gradually diffused themselves over the Borough in September. The eldest of our inhabitants, do not recollect this insect's being troublesome here, in any previous season, while the unanimous report of persons from the fenny counties of Kent and Sussex, the annual haunts of these winged pests, was, that they were unusually free from them.

4. The sources of noxious effluvia in the southern and flat part of the town, were much increased, by a regulation, but partially executed, for bringing the streets to an uniform descent from the summit of the hill. A number of cellars was filled with water—a new dock formed, and the gutters lowered in some places and raised in others, forming numerous depositories of filth. These circumstances added to the nuisance in King-Street, rendered the air of

that quarter offensive to the smell in the day time, and doubly so at night. After the 15th of September, the air had a taint resembling bilge water, especially after a light shower of rain and in the night, and more sensibly recognized by persons coming immediately from a higher region.

5. The fogs which collected in the evenings were suspended on the flats during the nights, gradually becoming more compact in the mornings, and mostly passed off in a dense cloud towards the Delaware, between seven and ten o'clock. This semi-circuit of the fogs, from Market-Street southward and eastward was the seat of concentrated disease. Those fogs were condensed miasmata of fever, in a familiar garb.

The seat of disease was so well defined until the 15th of October, that the inhabitants north of Third-street felt but little apprehension; and as the fogs became diffused a few scattering cases of disease appeared, and removal was the only mean of safety.

6. The poisonous matter exciting disease, was evidently a constituent part of the fogs. Many persons visited the infected district in clear weather and in the day time, without injury, and several of the same persons, contracted disease by a single exposure in the night time, after the fog had collected. It, also is remarkable that, the disease generally attacked in the night-time.

7. The non-contagious nature of the disease, was repeatedly attested, by persons sickening after removal from the lower to the higher parts of the town, and being nursed with every attention, and dying, without communicating the malady to their attendants. Also, two sailors had the disease, on board of different vessels at separate wharves, without affecting their companions.

It is not denied that, the more malignant cases of disease may be incidentally contagious, or rather re-infectious, under circumstances favoring a new chemical combination of the venomous offsprings of filth and putrifaction.

8. A noxious state of atmosphere was manifested by the lingering state of convalescents, who remained in the contaminated region, while those, who removed into the country were speedily restored to health.

9. The indigenous nature of the disease, was evidently characterized by the ultimate sameness of every form and grade of fever. After the middle of September, the subordinate forms and grades of fever, not arrested within 48 or 72 hours, invariably passed on to the malignant grade of disease. No matter how slight the attack, nor who the subject, the livery of pestilence sooner or later appeared: and valetudinarians, cases of pulmonary consumption excepted, suffered in the common fatality.

Lastly, the rise, progress and confined state of the disease—the manner in which the fluctuating malady corresponded with the varying states of the weather—the non-communication of disease to the attendants on the sick, when out of the original sphere of infection, and the sporadic appearance of disease in other parts after the more extended fog on the 15th of october, with the final termination of the progress of infection by a single frost, are, in my opinion, evidences striking as the nature of the case will possibly admit, that the multiform disease which afflicted us, was not of foreign origin, nor specifically contagious.

Believing that a proper attention to the internal condition of this Borough and preserving the adjacent marshes in their present state of cultivation and improvement by

numerous drains would be the surest means, under Providence, of securing us against a repetition of the calamity,

I am Gentlemen, with sentiments
of personal esteem and profession-
al deference, respectfully your
friend and humble servant
JOHN VAUGHAN.

Wilmington (D) }
January 6th 1803. }

P. S. The following articles are, by request, annexed—

No. I.

A statement of the conflicting opinions of the day, respecting the foreign or domestic origin and nature, of the malignant disease, commonly denominated *Yellow Fever*.

The controverted question, whether pestilential fever be of foreign or domestic origin, shall be stated with impartiality.—The advocates of foreign origin, believe the disease to be specifically contagious, and propagated only by a peculiar matter secreted by a diseased body and emanating from one person to another in regular progression, as in the case of small pox and other diseases confessedly contagious. And that pestilential fever cannot exist in our country, unless a germ, or given portion, of this specific matter be imported from abroad by means of sick persons, clothing, or other substances charged with the contagious material. At the same time, it is admitted, that this disease cannot be propagated in uniform succession in any town or place, like the small pox or measles, but, is generally confined to seaport towns.

On the other hand, the advocates of domestic origin, contend that, the Yellow fever, so called, may originate in any town or place sufficiently contaminated by the aerial pro-

ducts of putrifaction in the autumnal season, and especially if the season be tropical, as that of 1802 manifestly was.— They consider pestilential fever, as a higher grade of the endemic bilious fever of America and other countries, rendered malignant by local miasmata, generally denominated septic effluvia, and a morbid constitution of atmosphere, which appears to have given a pestilential livery to our autumnal fever, since the year 1793. They admit that, the disease may be imported, so far as the simple question of importation rests on the existence of disease on board a vessel arriving from a foreign port; but, deny that a vessel so infected can occasion an epidemic prevalence of the disease in any port or place, by the communication of a specifically contagious matter. Admitting, at the same time, that a healthy person going on board a filthy or infected vessel, may contract disease, but, that disease will not communicate and cannot be propagated beyond the original sphere of infection, unless a new source of infection be constituted, by local filth and a want of ventilation.

The general question of *importation*, cannot be better illustrated, than is already done in the following extract from the Medical Repository vol. 3. page 198 and sequel :

“ The term *importation* is ambiguous & perplexing in its application to diseases. Scarcely an instance can be adduced, in all the compass of language, where more mistake has arisen from the misunderstanding and misapplication of a single word. The mercantile use of it is, indeed, well understood; and, when employed to express the bringing of articles of merchandize into a country from abroad, in bulk, it seems scarcely liable to be mistaken. But a moment's consideration will satisfy us that this sense of the word will not apply to the introduction of the disease in question. As examples of the ambiguity of this term, in respect of the origin of Yellow Fever, we shall briefly notice some of the various senses in which it has been used by different persons.

1. Is the Yellow Fever imported from the West-Indies by a continued propagation of contagion from one person to another in succession, or by a lodgment of such contagious matter, originally derived from the bodies of persons ill of that disease, in certain substances adapted to receive, retain, and afterwards diffuse it, as in the case of small-pox and measles ! In our opinion this cannot be admitted—because that disease, according to the best authorities, is not contagious in the West-Indies—because it is not pretended to be generally contagious in this country, beyond certain local ranges of air contaminated by other causes—because multitudes take the disease in our cities who never approached the sick or the vessels pointed out as the source—because multitudes approach the sick, and perform every requisite office for them without infection—because the disease is found to prevail in parts of our country not visited by persons from the West-Indies, and inaccessible to sea vessels—because it prevails only in peculiar seasons and situations—and because it yields speedily to frost. It is surely wonderful that this *specific contagion* of Yellow Fever contended for, so subtle as to lurk in the most unperceived and unsuspected places, so inextinguishable as to resist all the winds and rains of heaven, in the passage from the West-Indies, and so virulent as sometimes to cause death in a few hours should yet never produce the prevalence of the disease in the cities of the United States but just at that time when domestic miasmata are exalted by the season to the highest point of force, and that, precisely like such miasmata, it should immediately yield to hard frost. These circumstances, as we believe, do not apply to any disease of specific contagion hitherto known ; but they form only a small part of our objections to this mode of importation.

2. Is the Yellow Fever imported into this country by bringing across the ocean a quantity of the peculiar air of the West-Indies, which escapes from the holds of vessels while the cargo is discharging at the wharf ? This opinion is too absurd to stand in need of refutation. None but an

air-tight vessel could for such a time, and with so much motion, confine a portion of atmospherical air received into its hold.

3. Is the Yellow Fever imported by the generation of noxious vapours arising from neglect of cleanliness and ventilation, and from the long accumulation of dead animal and vegetable matter, rendered putrid by heat and moisture, on board the vessels trading to and from the West-Indies? This mode of importation, if it can with any propriety be called so, we believe to be some times a fact. We believe that this disease is occasionally taken by receiving the exhalations of such a filthy and putrid ship; but we are confident at the same time, that these exhalations differ not materially from such as are emitted from the docks and sewers, and many other local sources of putridity which abound in our cities.

And we are equally confident that such exhalations from ships can never produce an epidemic prevalence of the disease, without the concurrence and aid of miasmata from other sources, for the purpose of diffusing the poison. But how is the term *importation* applied to this sort of noxious power? Is it because it is an accident or contingency which may take place in a ship? If a ship had never gone to sea, but had remained at a wharf from the moment of launching she might still collect a mass of putrid matters, and thereby become a source of disease.—We have no quarrel with the word *importation*, if it be used to express this accidental occurrence in ships trading to the West-Indies, and if it lead no person into error. But we contend that, with the same propriety, many other unfortunate accidents occurring at sea, such as the devastation of storms, the damages of cargoes, and the miseries of famine, might all be denominated *imported* evils.

The advocates of the domestic origin of this disease are often called upon to explain the more frequent occurrence of it within a few years past; since heat, filth, and

putridity, for a long time, and, in some instances, more remarkably in former times than lately, have characterized the cities of America. But only a moment's reflection will be requisite to perceive, that the doctrine of importation will by no means relieve this difficulty. As the Yellow Fever has constantly, more or less, prevailed in the West-Indies, among Europeans and others newly arrived from the higher latitudes, for more than a century past, and as our intercourse with these islands has been subject to little interruption within that period, why has it not been imported, and rendered epidemic every year? In our opinion this difficulty can only be resolved by ascribing the malignancy of recent epidemics to a peculiar, though unknown, morbid constitution of the atmosphere; an occurrence which the history of disease, (independently of Yellow Fever), in all ages, and in all regions of the globe, is found incontrovertibly to attest, and which is observed to return and prevail at unequal and indefinite periods."

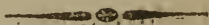
Hence the contagious or non-contagious nature of pestilential fever, is transformed to the question of *contagious* or *infectious*? The influence of custom in establishing the use of the words contagion and infection as synonymous terms, has been counteracted by a critical distinction drawn by modern writers between them. By the term *contagion*, is now understood, an inherent and essential quality of a disease, necessarily existing and emanating from a diseased body, and affecting persons exposed to its influence, with a peculiar disease, as the small pox or measles. By *infection*, is meant, an aeriform substance arising indiscriminately from any source of putrefaction, and capable of exciting fever in persons exposed to its immediate action.

In the former case, persons may be affected by *contagion*, or contact with a diseased body, or with material previously charged with the specific poison. In the lat-

ter case, disease is alone contracted within the range of original infection. It is alike immaterial, whether the source of *infection* be on sea or on land—in the hold of a vessel or in a town or a marsh, the effects are the same in kind, though modified in form and proportioned in degree, to the causes which gave them birth and the collateral circumstances attending their progression. The influence of the seasons in limiting or extending the range of infectious disease, is in all cases remarkable. A pestilential fever, may be either sporadic or epidemic in a given sphere, as resisted or favored by the state of season; and it is a most fortuitous law, in the physical economy of pestilence, that frost in America and the hurricanes in the West-Indies, arrest the devastations of the ærial destroyer: whereas *specific contagion* pursues its course, uninterrupted by any state of weather or change of seasons. The lapse of ages, itself, has not changed the form or nature of small pox, save only as it is moderated by the improvements of art; and, now likely to be banished from the catalogue of human afflictions, by the beneficent aid of vaccination.

It would also appear, from some publications on the subject, that *the question of policy*, were to have influence on popular opinion; but, it should be held in remembrance, that the question of expediency, in this case, becomes ultimately a question of *life or death*. That, honesty is the best policy, is a maxim in ethics, and deserving of regard in medicine if not in commerce. It has, however, been said that, if the domestic origin of pestilential fever were admitted, our sea-port towns would be ruined and our trade destroyed. But, it should not be forgotten that, the doctrine of contagion is equally if not more injurious to commercial policy. If the malignant fever which has afflicted us for some years past and which annually exists in the West-Indies, be specifically contagious, it is no matter how much commerce is abridged by quarantine laws—no matter if every vessel from foreign ports be precluded, still the clandestine introduction of an article of clothing poisoned by contagion, may propagate the mala-

dy. And neither bars nor bolts—quarantine laws nor walls, will effectually resist the entrance of all persons long absented from their families and their homes; nor the smuggled introduction of goods by our enterprising traders. On the other hand, if the doctrine of domestic origin were agreed to by legislators and police officers, the more simple and easy process of removing local and obvious sources of evil, would exempt us from the ravages of the pestilential grade of fever. However, be the reality as it may, enwrapped as it is in the mazes of conflicting opinions, all persons charged with the municipal regulations of our cities and towns, should bear in mind the common cause of common mischief—i e it is agreed, that local filth may aggravate, if not originate, pestilential fever. And if the door of commercial entry be closed, let the local sources of evil be eradicated also; then, time, experience, and the exercise of liberality of opinion, may settle the important controversy.



No. II.

Statement of facts respecting the case of the schooner Eliza.

In a publication that has lately appeared in Philadelphia, the Board of Health of this Borough are charged with improper conduct in giving a “clean Bill of Health” to the Schooner Eliza, which arrived here from Port-Republican in the month of June and afterwards permitted to go to Philadelphia—the case is stated thus :

“On the 4th of July the Schooner Eliza from Port-Republican, but last from Wilmington, Delaware, which had lost some of her hands in the Cape & on her passage arrived at this port, and came to a little above the Draw-bridge. Notwithstanding these circumstances she had received “a clean Bill of Health from the Port of Wilmington.”

To remove the imputation cast upon the Board of Health, and to enable the public to judge of the facts, the subscribers, officers of the Board at that time, publish the following documents.

No. 1. Certificate of the Health-Officer of the Port.

Upon a strict examination of this vessel, I find the cargo in good condition and all the people on board healthy, two men who belonged to the vessel sickened in port, and were attended and died on shore; their disease not ascertained; however from a passage of seventeen days with patent ventilators and the people on board continuing all in good health, and the cargo in a sound condition, I am warranted to conclude that they are free from any contagious or infectious disease. The vessel is therefore permitted to enter the Port of Wilmington.

Signed, E. A. SMITH, Health-Officer.

Mr. SAMUEL SPACKMAN, Sec. of the B. H.

No. II.

Certificate of the Acting Committee of the Board of Health.

This is to certify that we have examined the Schooner Eliza, Thomas Hunt, master, and find she has been well cleansed; and that the cargo consisting of Coffee and Goat-Skins, now in Seal, Hays and Co's. store is in good order and was landed the 28th of June last.

Signed, JOHN WARNER,

JAMES HEMPHILL.

Certificate. No. III.

The subscribers certify, that the Schooner Eliza, Capt. Hunt, which arrived here from Port-Republican on the 26th June, 1802, was an admirably clean vessel. She was

hove down, completely overhauled and caulked, and in our belief thoroughly cleansed.

It may be remarked that the carpenters who worked on board of her, were perfectly healthy, and that the subscribers and many other citizens went on board of her, frequently, without fear and without contracting disease.

Signed, *JAMES BROBSON,*
 ALLEN M'LANE,
 EDW. WORRELL,
 JOSHUA SEAL.

Wilmington, January 5th, 1803.

By these documents it appears that the Schooner *Eliza* arrived here on the 20th of June 1802, and after due examination, was permitted to entry. She discharged her Cargo which was in good order at the Wharf of Seal, Hays and Co, was completely overhauled and frequently visited without communicating infection to the workmen, or others. She performed a quarantine of fifteen Days, and arrived at the Port of Philadelphia on the 14th of July, a lapse of thirty five days after her departure from the Island of St. Domingo.

When we consider the condition and circumstances attending this Vessel, it is highly improbable that she could have carried Contagion to Philadelphia without the evil being manifested here. If such were the fact, tho' apparently impossible, the subscribers consider the Board of Health free from any real ground of charge of neglect or otherwise.

JOSEPH BAILY.

SAMUEL SPACKMAN.

Wilmington, 1 Mo. 5th 1803.

It is presumed that, this combination of evidence in support of the cleanly and healthy state of the Schooner *Eliza*, will effectually remove the suspicions of that vessel having been neglected by the Board of Health of this Borough, and of her carrying contagion to Philadelphia.

The generally healthy state of the Shipping, which arrived here last season, afforded little ground for the exercise of suspicion, itself. Besides, they were regularly inspected and the crews examined by the Health Officer, and after due deliberation by the Board of Health, were permitted to entry or subjected to quarantine, as existing circumstances required. Also, the subsequent condition of vessel and cargo was re-examined by an acting committee of the Board, previously to their granting a *Bill of Health*.

If the utmost vigilance towards the source of importation will not secure us from the calamity, is it not high time the counter experiment were made, and every source of domestic evil eradicated?—The Corporation of the Borough have lately issued a Proclamation exhorting the inhabitants to be vigilant in removing collections of filth from their yards and other appurtenances, in cleansing their cellars, privies &c. and “to do every thing in their power, to prevent putrid exhalations from arising in or about their houses.” Also, expressing a determined resolution, of that body, “to co-operate with the citizens, so far as the laws will warrant, in the removal of all nuisances complained of.”—But, will all nuisances be complained of? Or will the prescribed penalties of the Health law relative to nuisances be executed by the Police? We fondly hope they may. It, however, must be acknowledged a lamentable fact, that when a calamity has passed, mankind seem disposed, as it were by a physical indifference, to muse over the dangers they have escaped, without appreciating them to their future welfare.

“ Ah ! in what perils is vain life engag’d !
 “ What slight neglects, what trivial faults destroy

" The hardest frame ! —————
 " ————— the fates come rushing on ;
 " The rapid fates admit of no delay.
 " While wilful you, and fatally secure,
 " Expect tomorrow's more auspicious sun ;
 " The growing pest, whose infancy was weak
 " And easy vanquish'd with triumphant sway
 " O'erpowers your life. For want of timely care
 " Millions have died of medicable wounds.
 " ————— " a secret venom oft
 " Corrupts the air, the water, and the land.
 " What livid death's has sad Byzantium seen !
 " How oft has Cairo, with a mother's woe,
 " Wept o'er her slaughtered sons and lonely streets !
 " Even Albion, girt with less malignant skies,
 " Has felt the sting of monsters *all her own.*"

*LIST of all persons who died in this Borough, from the 1st
 of September to the 2d of November, 1802.*

Johnson Owens,	R. Fenwick's child,
'Thos. Musgrove, a child,	Mary Smith,
Mary Brown,	Esther Carpenter,
Mordecai Cloud,	Walter Cummins,
Ann Hadley,	John Hadley's child,
Peter Lowther, a child,	Josiah Coolen,
Hannah Robinson,	Christian Beurnan,
Mary Bates,	Aphonso Alderdise,
Penelope Days,	William Thompson,
—— Sweetapple, a child,	E. Joice, a child,
Hannah Swayne,	Samuel Musgrove,
Esther Warner,	Elizabeth Springer,
Abner Dickinson,	Eliza King,
Ann Jackson,	Phebe Mendenhall,
Lavinia Witsal, a child,	Ann Catherwood,
* Wife of William Preston,	Andrew Catherwood,
Mary Reynolds,	Rachel Peterson,
* William Preston,	Joseph Burton a child,
Sarah Thompson,	Isaac Stevenson's child
Ruth Alderdise,	Ann Thompson,

Thomas Musgrove,
 Phebe Jordan,
 William Sharp,
 John Harvey's child,
 John Armstrong's child,
 James M'Minn,
 Edward Smith,
 Cleland Boyd,
 Edward Carpenter,
 Lydia Warner,
 Elizabeth Biays, Junr.
 Linah Hindman,
 Susanna Kawn,
 Elihu Chandler,
 Lydia Vallet,
 Samuel Whitaker,
 Margaret Kean,
 Sarah Hartley,
 Thomas Clarke,
 James Brown,
 Sarah Webb,

Susanna Kendall,
 William Hawkins,
 Mrs. Bodill's child,
 Sarah Brian,
 Manassah Scantling,
 Jonas Alrichs,
 John Hogg,
 Mary Janvier,
 Cleland Boyd, a child,
 Sarah Kean,
 Henrietta Gairy,
 John Martin,
 Peter Young (stranger)
 Thomas Kean, Esq.
 Elizabeth Biays, Senr.
 Wilson Kendall,
 William Sherer,
 James Smith's child,
 Hannah Harlan,
 John Ferris,
 Daniel Morrison.

* Died after removal into the country : also, Rebecca Taylor, Hetty Sutton, and two others—total 86.

FINIS.

